

THE AMERICAN JOURNAL
OF
OPHTHALMOLOGY.

VOL. XVIII.

MARCH, 1901.

No. 3.

ORIGINAL ARTICLES.

A CASE OF MYO-FIBRO-SARCOMA OF THE ORBIT.

(With Micro-Photographs.)

By ADOLF ALT, M.D.

ON January 23, 1901, E. G., a cowboy from Arkansas, was brought to my office for consultation. The history given by Dr. Meade, the physician accompanying him, was that about a year previously a swelling had been noticed in the left lower lid at the nasal canthus, which kept on growing to the apparent size of a walnut. Some physician then made an attempt to remove the tumor, which proved, however, absolutely abortive. About a month previous to his consulting me, the physician, who came with the patient, had also tried to remove the tumor, but this operation had evidently to some extent remained incomplete, because the patient did not take an anæsthetic kindly and could not stand any further pain. Still, by this operation a tumor of the size of a small walnut was removed from the *lower lid*. The wound healed kindly. There had been no exophthalmus observed *at any time*, nor was there any double vision; yet there was evidently still a tumor in the *orbit*, behind the lacrymal caruncle, and the question was what to do with it.

On palpation, I felt a round, semi-hard, smooth tumor situated behind the lacrymal sac and immovably connected with

the periosteum. It was even now not large enough to cause any exophthalmus and did not seem to reach far back into the orbit. Of course, I advised the immediate and thorough removal of all of the pathological tissue, after splitting the inner canthus, so as to have an easy access to the parts, the lacrymal drainage apparatus having been previously destroyed.

The operation was made in this manner on the same day by Dr. N. B. Carson, of this city, through whose kindness I obtained this specimen. The specimen removed by the former



FIG. 1.

operation I had also obtained through the kindness of Dr. Meade.

The whole mass together was about the size of a walnut. It was hardened in formol and then in alcohol and embedded in celloidin.

The tumor shows very much the same structure in all its parts, and consists, in the main, of dense fibrous tissue, mixed with a much larger quantity of long slender spindle cells with the characteristic rod-shaped nucleus, which are undoubtedly non-striated muscular fibres. These, like the fibrous tissue, are arranged in bundles of different sizes, and the two kinds of tissue are very closely interwoven. (See Fig. 1.)

Here and there round cells are found in the interstitial tissue and around some of the very numerous blood-vessels which the tumor contains.

The muscular coat of most of the blood-vessels is very thick. In many places, in every specimen, muscular fibres are seen to grow away from the blood-vessel into the surrounding tumor-tissue. In some instances all of the regularly arranged muscular coat of the blood-vessels has gone up in the tumor-tissue, and what was a blood-vessel is now but a narrower or

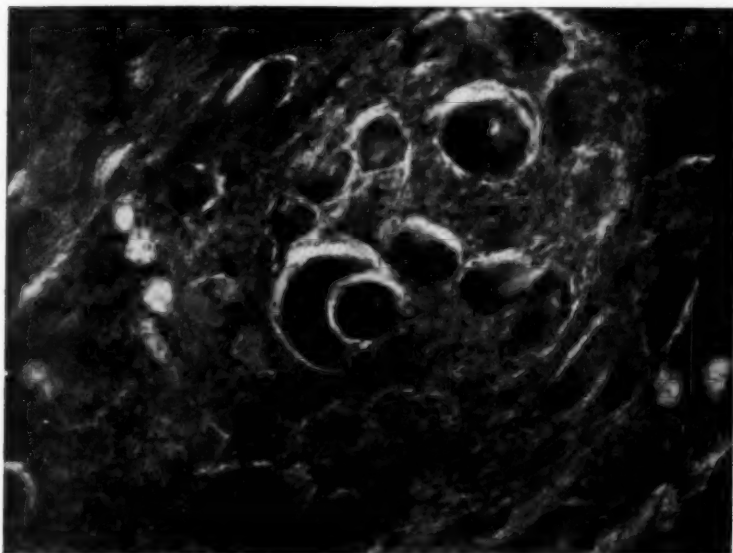


FIG. 2.

wider slit in the tissue which contains blood. In many places such slits are still lined with normal endothelial cells; in others even the endothelial cells have disappeared.

From these facts it is, I think, evident that the muscular fibres forming most of this tumor have taken their origin from the muscular coat of the blood-vessels.

The tumor further contains in one place a larger aggregation of giant cells. They are stained very deeply with hæmatoxyline, and while numerous nuclei may still be seen in them, they evidently contain a material which looks very much like amorphous lime and which is, perhaps, an organic lime combination, the forerunner of bone-formation. (See Fig. 2.)

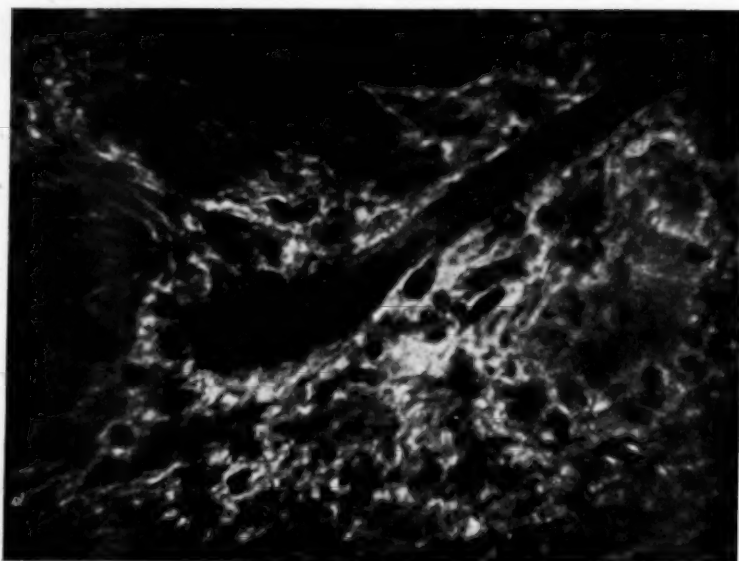


FIG. 3.

Indeed, in other parts there are larger deposits of crystals and crystalloid formations, which are decidedly lime. (See

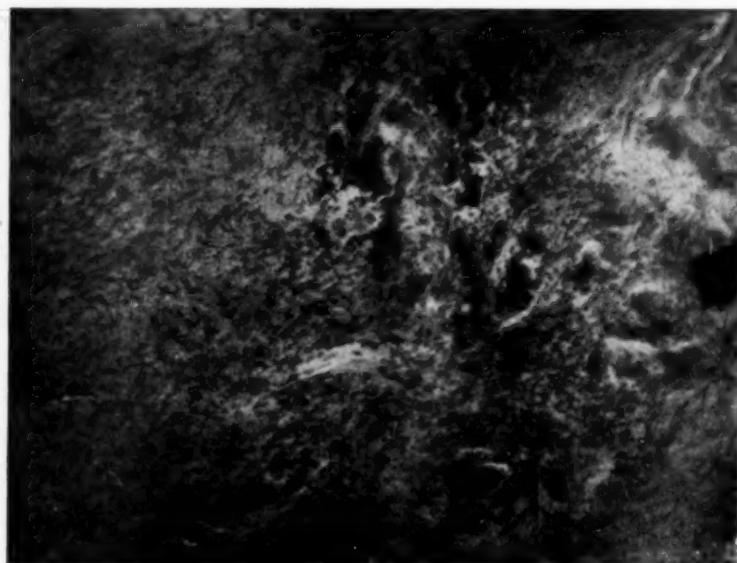


FIG. 4.

Fig. 3.) These are surrounded by numerous giant cells with very numerous nuclei. Some of them show bone structure. (See Fig. 4.)

The tissues surrounding the tumor are greatly infiltrated with round cells, and, I believe, the sarcomatous character of the growth cannot be doubted.

A CASE OF SUDDEN BLINDNESS.

By HOWARD F. HANSELL, M.D.,
PHILADELPHIA, PA.

JANUARY 14, 1901, my friend, Dr. Freas, of Philadelphia, brought to the Jefferson Hospital John McCullough, a white man, 39 years of age. He is a large-framed muscular man, a worker in an iron foundry, and seemed to be in perfect health. He had been entirely blind in both eyes for seven days. During the night, seven days previously, he awoke to find that he was unable to perceive the light of a match; in the morning he found all light perception had gone. At the time of the examination he could not see in any part of the field a thirty-two candle power electric lamp when held close before him. The eyes were free from all indications of inflammation, there was no external ocular paralysis; the pupils were widely dilated, unresponsive to light and responsive to convergence and accommodative efforts; the media were clear; the optic papillæ were slightly veiled, the retinal veins dilated tortuous, and the arteries contracted. These changes in the vessels were, however, not particularly marked, but were undoubtedly present. The retinæ were not œdematous nor were there any patches of exudation, or of connective tissue hyperplasia, or of hæmorrhages. The man's intellect was unimpaired. He complained of no pain, dizziness, vomiting, paralysis, or any alteration from the normal function of any of the organs. Repeated examination of the urine showed absence of sugar or of albumin. There was no heart or lung affection, and he had not suffered from any accident or fall, abscess or sore in any part of his body. He denies specific history, nor were there indications that he was not speaking the truth.

The data for determining upon a definite diagnosis were insufficient, but I made a tentative diagnosis of a lesion from hæmorrhage or a new growth in the region of the chiasm. Vascularity of the retina indicated probable pressure upon the

blood-vessels supplying the deeper portion of the eye immediately back of the apices of the orbits and the absolute loss of function of both optic nerves, and the slight œdema of the nerve leads me to believe that the lesion was in, or immediately in front of, the chiasm. There was no loss of sensibility of the fifth pair in any of its branches. The cavities accessory to the orbit were well illuminated by the electric light. Dr. Gibb, of the Polyclinic Hospital, who examined the patient later, decided that the origin of the trouble was not to be found in the nasal, ethmoid or sphenoidal cavities.

The treatment consisted in daily pilocarpine sweats, mercurial inunctions, inhalations of nitrite of amyl, and the administration of nitroglycerine. On the third day after this treatment was instituted light perception returned to the right eye, and on the fourth day to the left eye. The improvement in the vision daily was quite rapid for several days, and since then has been extremely slow. At the end of two weeks the right eye had recovered ability to count fingers at several feet, and in the left eye the perception of light and the counting of fingers close to the eye on the temporal part of the field. It was found at this examination that in the right there were no scotomata and that light could be seen in all parts of the field; in the left eye, however, a little more than the nasal half of the field was blind to light. The treatment was modified by the cessation of the baths and the inunctions and the addition of $\frac{1}{20}$ gr. strychnine, t. d.; the nitrite of amyl was continued since the patient stated that after each inhalation his vision seemed to be better. The nitroglycerine also was continued.

The examination made January 26th, six weeks after the onset of the blindness, resulted in practically the same findings. The loss of the nasal half of the field of the left eye was unchanged. The exact definition of the blind field was difficult to determine, but the boundary between the blind and seeing fields seemed to be exactly vertical and several degrees to the temporal side of the plane of the fovea. The pupillary reactions to light had returned. The obstruction of the circulation, as shown by the arteries and dilated veins, was still acting. Both papillæ had now become entirely clear and had assumed the whiteness of atrophy. There was no hemianopic

pupil reaction of the left eye and the condition of the eyes and of vision at the last examination confirmed the diagnosis of the situation of the lesion in the chiasm. No further light has been thrown upon the etiology of the disease.

The last examination was made February 18th. The patient complained that during the past week vision had steadily declined, so that to-day he is scarcely able to find his way about the streets. The ophthalmoscope shows advancing atrophy of the nerves with further contraction of the arteries, the veins remaining unchanged. In the left eye perception of light remained on the nasal half of the retina only. The prognosis is extremely unfavorable. Degeneration of the nerves will probably continue until all light perception is gone. The treatment which seemed to be successful in the early period of the affection is now unavailing.

THE TEACHING OF OPHTHALMOLOGY IN MEDICAL SCHOOLS.

BY F. L. HENDERSON, M.D.,

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to St. Mary's Infirmary; Consulting Oculist to the Wabash Ry.
and the Terminal Ry. Assn., etc.

ST. LOUIS, MO.

IN the February number of the *AMERICAN JOURNAL OF OPHTHALMOLOGY* Dr. Swan M. Burnett has published an article on the above subject, which he closes with the hope that other teachers will give expression to their opinions. My experience as a teacher of this branch has covered a period only one-third as long as Dr. Burnett's, but since this fact puts me many years nearer to the period of undergraduate life, I may be excused for offering my views.

There are many good reasons why the subject of medical teaching should occupy the attention of our profession. There are one hundred and fifty-eight medical schools in the United States, which contain about twenty-five thousand pupils. The number of graduates each year is between four and five thousand. These unfortunates are being subjected to an ordeal appalling in its severity. If you doubt it, examine the curriculum of any good four-year school, look over the text-books,

and then figure out the amount of time the student has in which to accomplish certain results. It will be found that accurate, definite, working knowledge of the twenty-six branches now taught is an impossibility. The result is that an over-conscientious few all but kill themselves and the rest devote their time to scheming upon how to "get through." Another fact which bears heavily on the situation is that medical professors are rarely selected on account of their teaching ability. Teaching is a secondary consideration—merely an incident in the week's work. It serves as a good, ethical medium for personal advertising and is too often used with that object exclusively in view. Modern theories of pedagogics are totally disregarded. The antiquated didactic lecture or "how I do it" is still the favorite method. The corollary of the lecture or *viva voce* method of teaching is the student's inaccurate and misleading note-book, which owing to the bulk of the printed text-books he uses to the exclusion of the latter.

The subject of medical text-books would itself take up the space of this article if one were to attempt to exploit their ridiculous unfitness. The text-books on ophthalmology are divided into two kinds: the large works, which contain so much as to be utterly useless to a student in the stress and anxiety of the senior year; and the small manuals, which give little enough, but fail to discriminate between the ophthalmology of the general practitioner and that of the specialist. I believe the so-called text-books on the other branches of medicine are similarly defective. The system of multiple text-books is observed nowhere except in medical teaching. I know of one professor who delivers but forty-eight lectures during the four years' course, yet recommends twenty-five text-books, most of them being the seven hundred-page variety. In every senior class of any size a dozen different works on the eye can be found, and each author as well as the teacher will, in all probability, have a different nomenclature and classification. This unnecessary lack of uniformity adds to the distress and confusion of the pupil.

Since my experience as a teacher has been limited to the chair of ophthalmology I will confine myself to a discussion of the conditions which confront a teacher of that branch of medicine. I believe I am justified in assuming that similar

conditions exist as regards the other departments. The majority of our schools teach ophthalmology only to the fourth-year class and allow two hours each week for this purpose. The average course being six months long, gives us forty-eight hours in all to teach the graduate what he must know of the eye. These hours are usually divided equally between didactic and clinical instruction. I believe the suggestions of Dr. Burnett relative to clinical teaching can not be improved upon. A fact, however, which must not be lost sight of in estimating the value of clinical instruction, is that the student's ignorance of the eye renders the clinics of the first half of the year more or less useless, the value of the clinics increasing with the progress of the didactic instruction. Any teacher who devotes his clinical hours to the major eye operations before an amphitheater full of students, not one of whom sees what is being done, is more interested in impressing the class with his skill than in impressing it with the elements of differential diagnosis.

Having twenty-four hours for didactic instruction, let us estimate how much time the student has for learning. There are usually five or six lectures a day, and if a student studies five or six hours each day outside of the college he has done as much as can reasonably be expected of him. After the long day in the lecture room, to study from 7 to 12 o'clock six nights in the week, and to keep it up for six months, requires good eyes, a sound mind, a strong constitution, and an equable disposition. For every hour of teaching there is then one hour of study, consequently forty-eight hours is all the student has to devote to ophthalmology outside of the class room. Having but twenty-four hours in which to teach didactically all that the student is to get before graduation, and the pupil having but forty-eight hours in which to learn all that he is expected to know, the question is, what shall he be taught? We are confronted by the fact that the amount of information which can be imparted in this time is distressingly small and the amount which can be assimilated is even less.

It should be the purpose of a medical school to provide its graduates with an equipment which will best meet the demands of general practice. I do not believe the elective system should enter into a medical curriculum, as undergraduate

specialism must result in unsymmetrical development. It has been maintained by the broadest medical minds that no man is properly prepared for special work until he has had experience as a general practitioner. The elective system is not only a subversion of this conception, but goes farther and would narrow the school training as well as the experience of the practitioner.

It is on the subject of what shall be taught that I differ radically from Dr. Burnett. After specifically calling attention to the limitations of time based upon the same figures that I have used, he proceeds to outline a course which would require vastly more time than he has at his disposal. My explanation of this discrepancy is that Dr. Burnett knows ophthalmology so well that he is not conscious of the difficulties attending its acquirement. Having taught for twenty years, it is so long since he wrestled with the true and false image that he confounds acquired and intuitive knowledge. I will quote him on the subjects which are to be taught in twenty-four hours. "This discussion of the anatomy of the eye should begin with a demonstration of the structure of the orbit and especially its relations to the accessory sinuses and the openings leading into the adjacent cavities, with an indication as to their significance in pathological conditions of each." "The macroscopic anatomy of the globe itself should be taught by dissected specimens." "The demonstration of the microscopic anatomy comes next."

Let us stop and think how many hours of our twenty-four it would take to teach the anatomy of the eye in this way to a class of from fifty to one hundred seniors. Ask any average student how many hours of his forty-eight it would take to learn it in this way. Next comes the study of the eye as an optical instrument, and we are told: "The methods of trigonometrical construction as followed in the little book of Mr. C. F. Prentice on 'Ophthalmic Lenses,' and by some others, is amply sufficient for the general student." I have yet to see a general student who will not agree that this is amply sufficient. On the subject of lenses, the pupil is supposed to go so far as to learn "the modes of designating them in the various inch and the metric systems." Next comes "a thorough demonstration of the schematic or reduced eye, emmetropia, accom-

modation and its anomalies, and the forms of ametropia and the means of correcting the latter with the principles underlying them. This is done by didactic lectures." Lectures in the plural is well used here, but how many of the twenty-four can we spare on ametropia? When he reaches the study of the eye as an organ of sense we find this: "Theories of color perception can be then gone over briefly." By this statement we are led to presume that the conceptions of Young, Helmholtz, Preyer, and Hering are to be detailed. I would suggest that the correlation theory as expounded by Oliver be not overlooked. Its beautiful simplicity may entertain the student in his idle moments. Later, "diplopia and its significance as to the special muscles involved" is to be studied. Unless Dr. Burnett's students possess a very different brand of intellect from those I have associated with, it will require not a few of the forty-eight hours to learn to determine the paretic muscle or muscles from the position of the false image.

What we have gone over is only preliminary—an introduction to the serious business of the course, which is the study of diseased conditions. As would naturally be presumed, from what has preceded, accuracy and thoroughness are expected. He says: "Particularly should the signs and symptoms of conjunctivitis, iritis, and glaucoma be so clearly pointed out and insisted upon as to make an error in diagnosis impossible." And as further evidence of the thoroughness with which he expects the diseased conditions to be studied, I quote again: "When possible, bacteriological preparations of all conjunctival discharges should be exhibited." Feeling that he has not given his students as much as they can learn in forty-eight hours he says: "As much practical experience should be given in examining the refraction of the eye by means of test glasses, the shadow test and the ophthalmoscope, as possible." This sounds so well that you think you are reading from a college catalogue, but I need not comment on the chances of having superfluous time enough to train the class in skiascopy, to say nothing of estimating refractive errors with the ophthalmoscope. I do not mean to say that such knowledge as is outlined in the above course is not desirable in the graduate. Nor do I mean to insinuate that a teacher could not

cover that much ground—we must assume from Dr. Burnett's article that he has done it. I do not see how he can do it, and I do not believe any student can keep up with him understandingly.

Having had the temerity to criticise Dr. Burnett's suggestions I will offer my own, hoping that the subject will be taken up by others, and that its agitation may result in improved methods. I will confine myself to the two propositions: What shall we teach the undergraduate? and how shall we teach him? my remarks being based upon the fact that we have but twenty-four didactic lectures and the student but forty-eight hours study to devote to ophthalmology.

In the first place the line of demarcation between the ophthalmology of the general practitioner and that of the specialist should be distinctly drawn. Time spent in teaching a student even a little about the ophthalmoscope, the fitting of glasses, skiascopy, eye surgery, etc., is wasted, as he does not learn enough along these lines to make use of his knowledge. There is also the danger of impressing him with the idea that he is an oculist, and we know the incalculable harm which is being done by the general practitioner who thinks he has fitted himself for refractive work when he has purchased a set of trial lenses. Microscopic anatomy of the eye, "methods of trigonometrical construction," testing for glasses, all except the simplest features of eye physiology, ophthalmoscopy, skiascopy, and eye surgery belong to post-graduate instruction and to the specialist. Any student who learns the layers of the retina consumes time which could be spent more profitably in a dozen other ways. When I open one of the seven-hundred page text-books "for students and practitioners" and see the formula for calculating the index of refraction of a transparent medium, I am led to wonder what kind of a book the author would write for specialists.

To be specific as to what should be taught, let me say it will take four weeks (an hour each week) to cover the gross anatomy of the eye, and unquestionably this should be the first thing acquired by the class. In two lectures can be given all the student has time to learn of refraction, physiology, etc. Diseases of the ocular muscles will take two lectures. Diseases of the lids also two, and the lachrymal ap-

paratus and orbits will have to be crowded into one. If the conjunctiva and the cornea are given in three lectures each we have consumed seventeen of our twenty-four hours, and the remaining seven can be disposed of by giving an hour each to the iris, ciliary body and choroid, the crystalline lens, glaucoma, the retina, the optic nerve, and functional disorders of vision. Diseases of the sclera will have to be taught in the lessons on the cornea, and sympathetic ophthalmia will naturally be treated of with diseases of the ciliary body. When the subject is thus subdivided it will be easily seen that there is no time for the superfluous, and that an enormous amount of elimination must occur. In fact there is barely enough time to teach differential diagnosis, to which our energies should be almost exclusively directed. Other teachers may divide the subject differently, but divide it as you will there is only time to touch the "high places," and every word taught should bear directly upon the problems which may confront the student in general practice. Leave skiascopy and such to the post-graduate schools.

Having, I hope, made myself clear on the subject of what should be taught the undergraduate student, the next and last question is, how shall we do it? I believe the prevalent system of extemporaneous lectures, multiple text-books and students scrappy, disconnected, inaccurate notes, to be about the hardest possible way for teacher and pupil and the one calculated to accomplish the least. There is very little more reason for teaching some parts of the course by lectures than for teaching arithmetic that way. Imagine if you can a high school class in physics, some of whom have quiz compends, some with lead pencil note-books and others with seven hundred page text-books (all different); then top this confusion with a teacher who tries to impart the subject in twenty-four extemporaneous lectures and you have a condition found in many of our medical schools. As a substitute for the prevailing system, I would suggest that the professor of ophthalmology make it obligatory for every pupil to possess or have access to a text-book of his selection. Let there be uniformity in the book used by the class. If teachers of every other branch of knowledge have the right to demand this of their pupils, the medical teacher has. The book selected should

contain just what the pupil is expected to know, not a page more or a page less. It should contain only as much as a student can learn in forty-eight hours hard study, and its substance should be of the nature heretofore indicated. It should be divided into twenty-four lessons, or one lesson for each didactic lecture of the course. Instead of devoting these precious twenty-four hours to telling the student what he must know, let the little text-book tell him, and devote the hours to quizzing and finding out if he has learned his lesson. During the quiz a professor will have ample opportunity for injecting his individual information. At intervals of four or six weeks a written examination on the lessons passed may be given, one of the clinic hours being used for the purpose. By grading students on the oral quiz and on their written papers a teacher will come up to the final examination with some idea of the individual merits of his pupils, and justice is more liable to be done than when a student stands or falls on the result of one examination.

The suggestions made may be summarized as follows:

1. Eliminate from the course all that pertains to the specialist, and acquaint the student with the fact that he is only getting a fragment of ophthalmology.
2. Teach only as much as the student can learn in the limited time at his disposal, and let all that is taught bear directly upon his needs as a general practitioner.
3. Pay special attention to the diagnosis of those diseases in which an error would be disastrous.
4. Abandon the lecture and its corollary, the student's note-book.
5. Prescribe a text-book which contains exactly what the pupil is expected to learn and no more. If a teacher can not find a book which suits him he should write one. It should not contain more than 150 pages,
6. Instead of the lecture devote the hour to quizzing, and at periods of six weeks give a written examination. Grade each student at every opportunity, so that his final standing may bear some relation to his merits.

The above plan is not purely theoretical; I have followed it for the past four years and have every reason to believe that I now teach my students more and with less effort and anxiety on their part.

NOTES ON ADRENALIN.

(PARKE, DAVIS & CO.)

By ADOLF ALT, M.D.

THE firm of Parke, Davis & Co. sent me on December 27, 1900, the following letter, which will explain itself:

DETROIT, MICH., December 27, 1900.

DEAR SIR: The special character of your work will give an added interest to the announcement that the *active principle of the suprarenal gland* has been isolated by a member of our scientific staff, Dr. Jokichi Takamine, the well-known inventor of taka-diastase. We have now under way a process for producing this active principle (which we have named "adrenalin") on a large commercial scale, and we hope soon to have our first supplies ready for the market.

The clinical uses of the suprarenal gland have in the past appealed very strongly to general practitioners and specialists in the treatment of eye, ear, nose, throat, and heart diseases; hence it occurs to us that you may not be unwilling to test our adrenalin *before* we put it on the market. For this purpose we are venturing to send you a package of seven vials containing a small specimen of the adrenalin proper in basic crystalline form, and three solutions of the adrenalin chloride—1/1000, 1/5000 and 1/10000; also the same dilutions containing normal salt solution.

The active principle is in white crystalline form and its general chemical behavior is that of a basic substance. It is sparingly soluble in water—1 part in about 600 parts of water. It dissolves readily in dilute acids, forming various salts. Its solutions exhibit all the characteristic chemical and physiological reactions of the active principle of the gland.

A drop of the 1/10000 solution introduced into the eye will blanch the lids within from thirty seconds to one minute. Bloodless operations have been performed with this dilute solution.

The 1/1000 solution may be used by the mouth as a heart tonic. A small quantity of it has proved sufficient to stimulate the pulse during surgical operations under chloroform.

We should very much like to have you make clinical tests of the specimens sent you with a view to gauging the power of the adrenalin as a hemostatic, as an astringent, or as a heart tonic, and if you will kindly communicate the results of your observations we shall be very much indebted to you.

We trust that we have not presumed on your interest in the powerful and useful substance, and we beg leave to thank you in advance for such attention as you may give the solutions sent you.

Very respectfully yours,

PARKE, DAVIS & Co.

Ever since Bates (1897), Abel and Crawford, and Mullen (1898), and others had drawn the attention of oculists and aurists to the local effects of the extract of the suprarenal capsule, like many others, I have experimented with it in my practice. About a year ago, through the kindness of Messrs. Armour & Co., of Chicago, I received a large quantity of the desiccated suprarenal capsule manufactured by this firm, which I have also used. When, in the July (1900) number of the *AMERICAN JOURNAL OF OPHTHALMOLOGY*, Dr. L. Howe* described his method of preparing a solution which, contrary to all other methods, was to render the solution useful for from two to three weeks, I tried this also. Yet, while it was a decided advance, it was not quite as satisfactory as I had expected. All of these solutions and extracts became foul in a very short time and disgusting, if not useless.

The samples of adrenalin, which I have obtained through the kindness of Messrs. Parke, Davis & Co., are immensely superior in this respect, that in the two and a half months in which I have used them the solutions have not become foul. While each bottle contains now some fungous growths and the action of the solutions does not appear to be as strong and immediate as in the beginning, yet they cannot be called foul and spoiled.

In so far the adrenalin, as prepared by this firm, is certainly extremely useful and highly to be recommended. The action on the mucous membranes is prompt and efficient. Yet, it seems to me the value of this remedy has been in general somewhat overrated. It has certainly no quality as a remedial agent, as I have proven to my satisfaction time and again in all forms of inflammatory conditions in the eyelids and eyeball, and also in the ear. Its effect is evanescent, and while it may help to increase the action of cocaine, and perhaps prolong it, the cases in which its employment may be considered as useful are comparatively few. It is especially in eye and nose surgery that it may retain a place.

I have had no occasion to try it as a heart tonic.

*Note on the Preservation of Aqueous Solution of the Extract of Suprarenal Capsule.—L. HOWE.

CORRESPONDENCE.

THE PAN-AMERICAN CONGRESS HELD AT HAVANA, CUBA, IN FEBRUARY, 1901.

BURLINGTON, IOWA, February 27, 1901.

Editor AMERICAN JOURNAL OF OPHTHALMOLOGY:

The enclosed memoranda may give you some idea—not very clear perhaps—of the doings at the Pan-American Congress. Necessarily much of it is drawn from memory. Had I known beforehand that there would be so few of us to tell what we saw and heard, or that I should be asked for an account, I would have prepared myself to make a systematic and complete report. But such as it is, it is freely at your service,

Truly yours, H. B. YOUNG, M.D.

The attendance of eye, ear, nose and throat men at the Pan-American Medical Congress, lately in session at Havana, was not sufficiently large to warrant the organization of two sections as originally intended; and the time was therefore divided between them in one section, which assumed both titles. Ophthalmological papers were offered as follows:

1. "Statistics of Cataract in the Antilles Compared with Those on the Island of Majorca." Dr. J. Ramonell, Havana.
2. "A New Clinometer for Measuring the Torsional Deviations of the Eyes and Estimating the Degree of Distortion Produced by Cylindrical Lenses." Dr. Alex. A. Duane, New York.
3. "Report of a Case of Removal of the Superior Cervical Ganglion for Non-Inflammatory Glaucoma." Dr. Joseph Mullen, Houston, Texas.
4. "Case of Blindness from Sympathetic Ophthalmitis Complicated with Secondary Glaucoma; Restoration of Vision by Two Iridectomies; One with Extraction of Lens, Iridocystectomy, and Tynell's Operation of Drilling." Dr. Chas. A. Oliver, Philadelphia, Pa.
5. "Ocular Disorders in Lepers." Dr. Joaquim Patron Espada, Yucatan.

6. "Iridectomy After Simple Extraction of Cataract." Dr. Juan Santos Fernandez, Havana.

7. "Alcohol and Tobacco Amblyopia in Cuba." Dr. C. E. Finlay, Havana.

8. "Sterilization of Cataract Knives." Dr. Juan Santos Fernandez, Havana.

9. "Retinal Asthenopia of Spongers." (Idem.)

10. "Etiology of Ulcus Rodens Corneae." Dr. Eduardo Andrade, Venezuela.

11. "Arterio-Venous Aneurysm by Rupture of the Internal Carotid Into the Cavernous Sinus." Dr. Louis H. Debayle, Leon, Nicaragua.

Of the North American contributors only one was present, namely, Dr. Mullen. The case he reported was classed as a failure; for after the lapse of a few months all the symptoms of glaucoma were manifest as before.

Dr. Fernandez (6) believes that a small iridectomy after extraction reduces the chances for prolapse and synechiæ. That is his experience.

Dr. Finlay (7) demonstrated by a number of cases—92 among 4300 patients—that alcohol and tobacco amblyopia was not so rare in Cuba as former writers have reported. Cuban tobacco, although mild as a rule, and Spanish wine, although rarely taken to the point of intoxication, are not, therefore, harmless to vision.

Dr. Andrade (10) found through a number of cultures from several rodent ulcers that different ulcers showed different micro-organisms. He relied mainly on iodoform locally.

Dr. Debayle (11) gave a complete report of a case which he had under observation from the first disturbance (exophthalmos) to the fatal termination. Accompanying his report were numerous beautiful photographs showing the progress, the gross appearances at the autopsy, and structural changes as seen through the microscope. The patient was a woman of thirty-five years. Trauma (?), syphilis, and arterio-sclerosis were excluded, and a malarial origin was suggested.

Most of the papers elicited lively discussion. In fact the discussions in some instances were so lively among the Spanish-Americans that the "enervating influences of a tropical climate" became a doubtful quantity. Enthusiasm and fluency

of speech our Southern neighbors excel in; but they can profitably take from us a few lessons in system and speaking strictly to the issue.

All in all, however, in spite of the small attendance, the section meetings were pleasant and profitable. To those speaking English only, the mysteries of Spanish speech were made clear by Drs. Finlay and Andrade, who were indefatigable in translating.

Ophthalmologists in attendance from the United States: Carville, Manchester, N. H.; McDavitt, St. Paul, Minn.; Mullen, Houston, Texas; Young, Burlington, Iowa.

Ophthalmology was especially honored, however, in the selection of one of its leading exponents, in Havana, Dr. Fernandez, as President of the Congress.

PRIZE ESSAY OF THE MEDICAL SOCIETY OF THE STATE OF
NEW YORK.

At the ninety-fifth annual meeting of the Medical Society of the State of New York, held in Albany, January 29-31, Dr. Jacobi, of New York, Chairman of the Committee on Prize Essays, reported that the best essay submitted was written by Dr. Lucien Howe, of Buffalo. The essay was entitled "On the Measurement of the Inter-Ocular Base Line and the Size of the Meter Angle." The prize is \$100. We congratulate.

MEDICAL SOCIETIES.

PRELIMINARY PROGRAM OF THE MEETING OF THE WESTERN OPHTHALMOLOGIC AND OTO- LARYNGOLOGIC ASSOCIATION.

To be held at Cincinnati, Ohio, April 11-12, 1901.

OFFICERS AND STANDING COMMITTEES—1900-1901.

M. A. Goldstein, M.D., President, St. Louis, Mo.; H. V. Würdemann, M.D., First Vice-President, Milwaukee, Wis.; Fayette C. Ewing, M.D., Second Vice-President, St. Louis, Mo.; C. R. Holmes, M.D., Third Vice-President, Cincinnati, Ohio; W. L. Dayton, M.D., Treasurer, Lincoln, Neb.; William Lincoln Ballenger, M.D., Secretary, Chicago, Ill.

Program Committee.—Wm. L. Ballenger, M.D., Chairman; H. V. Würdemann, M.D., Edwin Pynchon, M.D.

Publication Committee.—A. Alt, M.D., Chairman; Wm. Scheppegegrell, M.D., Fayette C. Ewing, M.D.

Membership Committee.—H. W. Loeb, M.D., Chairman; B. E. Fryer, M.D., W. L. Bullard, M.D.

Arrangement Committee.—C. R. Holmes, M.D., Chairman; J. W. Murphy, M.D., Derrick T. Vail, M.D., H. Stow Garlick.

PROGRAM.

Thursday, April 11, Morning Session (General), 10 A.M.

Call to order by the Chairman of the Committee of Arrangements, C. R. Holmes, M.D.

Remarks by the President, M. A. Goldstein, M.D.

Announcements by the Committee of Arrangements.

Roll call.

Reports of Officers and Committees.

PAPERS.

1. Hemophilia in Relation to the Surgery of the Ear, Nose and Throat. W. Scheppegegrell, M.D., New Orleans, La.

2. Optic Neuritis Resulting from Intra-Nasal Diseases. Derrick T. Vail, M.D., Cincinnati, Ohio.

3. Paralysis of Accommodation Following Diphtheria.
J. H. Johnson, M.D., Kansas City, Mo.

Thursday, April 11, Afternoon Session, 2:30 P.M.

OTO-LARYNGOLOGIC SECTION.

1. A Means of Reducing an Overgrowth of the Inter-Maxillary Frenum, Permitting the Retention of Two Central Incisors in Close Apposition. H.W. Loeb, M.D., St. Louis, Mo.
2. Adenoids; Complications and Sequelæ. H. Stow Garlick, M.D., Cincinnati, Ohio.
3. Subject to be announced. Edwin Pynchon, M.D., Chicago, Ill.
4. A New Technique for the Reduction of Turbinal Hypertrophies. M. A. Goldstein, M.D., St. Louis, Mo.
5. Treatment of Some Purulent Conditions of the Antrum of Highmore Through the Natural Opening. Norval H. Pierce, M.D., Chicago, Ill.
6. Some of the Bacteria Found in the Nose, and Their Relation to Disease. Samuel Iglaur, M.D., Cincinnati, Ohio.

OPHTHALMOLOGIC SECTION.

1. Therapeutic Value of Adrenalin. Dudley S. Reynolds, M.D., Louisville, Ky. Discussion opened by W. L. Dayton, M.D., Lincoln, Neb.
2. The Value of Methyl Blue as a Local Application. M. F. Coomes, M.D., Kansas City, Mo.
3. Affections of the Lacrymal Apparatus. Flavell B. Tiffany, M.D., Kansas City, Mo.
4. Obstruction of the Lacrymal Duct and Its Treatment. John J. Kyle, M.D., Indianapolis, Ind.
5. Can the Conjunctival Sac be Rendered Aseptic with Safety to the Eye? B. E. Fryer, M.D., Kansas City, Mo.
6. Drainage of the Eye as a Basis of Treatment. Frances Dickinson, M.D., Chicago, Ill.
7. Dacryostenosis with Abscess. J. F. Reynolds, M.D., Mt. Sterling, Ky.

Friday, April 12, Morning Session, 10 A.M.

OTO-LARYNGOLOGIC SECTION.

1. Spongifying of the Bony Capsule—Especially the Differential Diagnosis from Total Disease. J. Hollinger, M.D.,

Chicago, Ill. Discussion: *a.* C. R. Holmes, M.D.; *b.* O. J. Stein, M.D.

2. Auscultation of the Mastoid. A. H. Andrews, M.D., Chicago, Ill. Discussion: Wm. L. Ballenger, M.D.

3. The Stapedius is a Muscle of Accommodation. Thos. F. Rumbold, M.D., St. Louis, Mo. Discussion: Noval H. Pierce, M.D.

4. A Case of Otic Cerebellar Abscess, Sinus Thrombosis, and Commencing Cervical Abscess; Recovery. C. Barck, M.D., St. Louis, Mo.

5. Some Points in Operating for Mastoiditis. Geo. F. Keiper, M.D., Lafayette, Ind.

OPHTHALMOLOGIC SECTION.

1. The Relation of Chalazia, Internal Stytes, and Tarso-adenitis. N. F. Weyman, M.D., St. Joseph, Mo.

2. Hysterical Disorders of the Eye. F. A. Phillips, M.D., Chicago, Ill.

3. Blennorrhœa Neonatorum. Adolf Alt, M.D., St. Louis, Mo.

4. A Contribution to Our Knowledge of Cortical Blindness. C. Barck, M.D., St. Louis, Mo.

5. Calcarious Infiltration of the Cornea. Oscar Dodd, M.D., Chicago, Ill. Discussion opened by S. C. Ayres, M.D.

6. Wounds of the Ciliary Body and Their Treatment. J. S. Mott, M.D., Kansas City, Mo.

Friday, April 12, Afternoon Session (General), 2:30 P.M.

JOINT SESSION.

1. Report of a Case of Vicarious Menstruation of the Retina. J. G. Huizinga, M.D., Chicago, Ill.

2. Atrophic Laryngitis. B. Tauber, M.D., Cincinnati, Ohio.

3. The Cause and Treatment of Laryngeal Edema. Hal Foster, M.D., Kansas City, Mo.

EXECUTIVE SESSION.

Report of Committee on Membership.

Election of New Members.

Report of Nominating Committee.

Election of Officers, 1901-1902.

Adjournment.

ANATOMO-PATHOLOGIC MUSEUM.

The museum will be in charge of Dr. John W. Murphy, The Groton, Cincinnati.

Members are requested to send or bring interesting anatomical, histological and pathological specimens, with a written (preferably typewritten) description of the same. A microscope will be provided for the examination of slides. New instruments may also be exhibited. A catalogue of the exhibit will be printed in the report of the annual proceedings so that the written description of specimens will be permanently preserved for future reference. Members are urgently requested to either send or bring specimens for this exhibit and are assured that every effort will be made to preserve them from damage. Interesting drawings and photographs may also be exhibited.

Dr. C. R. Holmes and Dr. J. W. Murphy will exhibit sections of the head.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.*

Thursday, January 31, 1901.

G. ANDERSON CRITCHETT, M.A., M.R.C.F.E., President,
in the Chair.

PARESIS OF DIVERGENCE.

DR. G. A. BERRY read a paper on so-called paresis of divergence. He cited cases and showed diagrams in support of his theory that the cause was really overaction of convergence rather than paresis of divergence. In cases when there was doubt whether strabismus fixus was present or not, the diagnosis was much facilitated by taking hold of the eye with a pair of fixation forceps and forcibly rotating the globe outwards. If this could be done it was clearly not a case of strabismus fixus, while if it were impossible, then it proved that it was a true case. He also read notes on some rare forms of non-paretic, non-concomitant squint in which, through faulty innervation, muscles not usually associated worked together,

*British Medical Journal.

such as the internal rectus of one eye with the superior rectus of the other.

ECLIPSE BLINDNESS.

DR. RAYNER D. BATTEN reported a case of eclipse blindness with thrombosis of a retinal artery and hæmorrhage into the vitreous.

The patient was a woman, aged 28, who watched the eclipse of the sun on May 28, 1900, without any protection than that offered by screwing up the eyes and looking between her fingers held close together. Immediately afterwards she noticed that things looked black, and the next morning she found she could only see "portions of things." She was first seen on June 6th, and was found to have lost the lower half of the field of vision in the left eye. The vision was $\frac{6}{18}$. Above the optic disc a white patch was seen, possibly an absorbing hæmorrhage, while the hazy and œdematous retina obscured the view of the disc and retinal vessels. The œdema increased until June 20th and then rapidly cleared, ultimately leaving a patch of choroido-retinitis above the disc. One of the upper retinal arteries was occluded and the others were reduced in size. The vitreous opacities cleared and the macula was unaffected. The vision improved to $\frac{6}{12}$ in the injured eye. In the right it was $\frac{6}{6}$. The patient was in good health, and no other cause could be found for the injury except exposure to direct sunlight.

MR. J. B. LAWFORD had observed three cases of eclipse blindness, but there were no ophthalmoscopic changes. In all, however, the scotoma had persisted with some deterioration of vision.

MR. TREACHER COLLINS related two cases. In one the discs became very pale, and there was a central scotoma. In the other the vision improved, but the fields were greatly contracted for white, and those for colors were very much smaller.

MR. JESSUP had published three cases. In all the vision improved, though there was a slight permanent scotoma.

MR. BOKENHAM gave details of two cases, in one of which there were retinal hæmorrhages. The vision improved from $\frac{6}{60}$ to $\frac{6}{12}$, but there was a marked central scotoma.

DR. BERRY thought the scotomata were usually permanent.

The general public was not sufficiently aware that blue glasses were worse than useless when looking at the sun and at bright lights. It was the blue and violet rays which did all the damage.

MR. JOHNSON TAYLOR, considering the marked way in which Mr. Batten's case differed from eclipse blindness, asked if there was at any time keratitis punctata, as he thought the whole condition might be due to irido-cyclitis.

DR. BATTEN, in reply, stated that no keratitis had been seen, and he could find no cause for this condition other than that given.

A CASE OF BULLET INJURY OF THE OCCIPITAL LOBES, WITH
LOSS OF THE LOWER HALF OF EACH VISUAL FIELD.

THE PRESIDENT read this paper. The patient, a captain in the British army, was struck by a bullet (probably Lee-Metford) while turning to address his men on the left. The pain was likened to that caused by a blow from a racquet ball. He lost his sight at once, but did not become unconscious for half an hour. He remained comatose for eight days, and on recovering consciousness was still blind, but a week later was able to distinguish the flash of a lighted match. He was trephined on the day following the injury, he believed, at both the point of entry and exit of the bullet. The trephine aperture at the site of entry, marked by a distinct depression, was situated two and a quarter inches above Reid's base line on the right side in a vertical line above the posterior border of the mastoid process, and one and one-half inch below and slightly behind the parietal eminence, four inches from the external occipital protuberance. The aperture of exit was half an inch to the left of the middle line, two inches above the protuberance, and one inch below the lambda. When examined, the pupils were active directly and consensually, the fundi were normal, and the vision in each eye was $\frac{6}{6}$ and Jaeger I. The patient had been prevented entering the navy by color-blindness. The lower half of each visual field was lost almost completely, the line of limitation being irregular.

This feature was the chief point of interest, as it afforded evidence of interference with the cortical visual centers. The bullet must have traversed the skull horizontally from before backwards and from right to left, and brain substance had

been recognized at the time of injury. The course of the bullet must have been through the anterior part of the right middle occipital convolution, injuring also the right and left cuneus. The sudden impact probably caused temporary paralysis of the visual centers from concussion. That there was a considerable extravasation of blood was proved by the rapid onset of unconsciousness, and this or the actual injury caused by the bullet might account for the persistent failure of the lower half of the visual fields, though on the latter supposition it was difficult to explain the exact symmetry of the visual loss. In a recent number of the *Lancet* Mr. Page had published a case of injury to the right occipital region attended with homonymous hemianopsia on the left side, complete at first but subsequently recovering. No optic neuritis could be detected in either of these cases.

MR. FISHER gave details of two cases of similar character to that cited, the lower half of the fields being lost—altitudinal hemianopsia.

CARD SPECIMENS.

The following were shown: Mr. W. H. Jessop: Case of Tuberculosis of the Conjunctiva.—Dr. W. A. Stirling: Primary Sarcoma of This Orbit.—Mr. W. Lang: New Growth on Ocular Conjunctiva, Probably a Papilloma.—Mr. J. B. Lawford: Concussion Injury of the Eyeball, with a "Hole" at the Macula.—Mr. W. T. Lister: Spreading Opacity of the Cornea Following Herpes Ophthalmicus.—Mr. W. H. Jessop: Case of Probable Distension of the Frontal Sinus in a girl, aged 10 years. Other cases in children were mentioned by Messrs. Poulett Wells, Tatham Thompson, Berry, and Little.—Mr. W. C. Rockliffe: Sections of a Conjunctival Growth. The nature of this being doubtful, it was proposed to refer it to a committee.

ABSTRACTS FROM MEDICAL LITERATURE.

By W. A. SHOEMAKER, M.D.
ST. LOUIS, MO.

CERVICAL SYMPATHECTOMY IN THE TREATMENT OF CHRONIC GLAUCOMA.

Angellucci (*Rif. Med.*, September 15, 1900) records two cases of chronic glaucoma where iridectomy could not be done, and where excision of the left cervical sympathetic was practiced as an alternative. In each case good results followed. The vision, which was $\frac{6}{60}$ before operation, became $\frac{6}{12}$ afterwards; the vitreous cleared and the tension was reduced from +1 to normal. In the second case vision improved from $\frac{6}{24}$ to $\frac{6}{6}$. In the first case after operation sensation of heat at the top of the head and vertiginous attacks became troublesome at times. In the second some difficulty was experienced in raising the corresponding arm, and certain effects of vascular dilatation, which had been troublesome before the operation, became worse afterward; also a fairly marked degree of hemeralopia set in. The local eye conditions were, however, considerably improved. Sympathectomy, the author thinks, is not suitable for acute and subacute cases, but may be tried in chronic cases where for some reason the more ordinary treatment fails or is inapplicable.

AN OPERATION FOR THE RELIEF OF STOPPAGE OF THE TEAR PASSAGE, ABSCESS OF THE SAC, ETC.

Erasmus A. Pond (*New York Medical Record*, February 2, 1901) describes a method for the free drainage of the lacrymal sac, relieving epiphora and obviating any dangerous abscess, in one operation. A long silver probe, with one end blunt and the other with an eyelet large enough to carry a coarse silk string, is threaded and passed through the canal into the nose when the end is seized with a pair of forceps and drawn out through the nostrils. The probe is then removed and the string left in position with the ends tied together. The string is worn about one week, being drawn through the nose two or three times daily. In tying he

makes quite a knot which, when pulled through the canal, enlarges the opening. The canaliculus may be slit or not as deemed advisable. Most of the operations have been done under cocaine, but in some he has used ether. There is no pain after the first operation. In abscess of the sac the string gives good drainage. The author has made use of this method for four years with good results.

Three cases are reported which were severe and of long duration, but were promptly and permanently relieved.

THE EFFECT OF CONVERGING PRISMS ON OUR NOTIONS OF SIZE AND DISTANCE: AN EXPERIMENTAL STUDY.

Alexander Duane (*New York Ophthalmic Record*, December, 1900), after giving 28 cases by way of illustration, draws the following conclusions:

From these experiments the following deductions may be made:

1. In the great majority of cases (23 out of 28) the effect of a converging prism was to make a distant object appear either smaller or more remote. In 17 of these it was both smaller and more remote; in two (Cases 2 and 11) it appeared smaller, but not more remote; in four (Nos. 4, 5, 14 and 19) it appeared more remote, but not smaller. Of these four last-named cases, however, it must be noted that two were only examined when under homatropin.

2. Both the apparent recession and the apparent diminution increased *pari passu* with the amount of convergence employed.

3. In some cases (Nos. 6, 12 and 15) the apparent recession of the distant object seemed to be the primary effect produced by converging prisms, since this recession was noticeable even with a prism that was too weak to cause any diminution in the apparent size of the object and since also with all prisms it was more marked than the diminution. In other cases the diminution in size seemed to be the primary effect.

4. In but a single instance (and that a very uncertain one) was the distant object alleged to look nearer.

5. In no instance was it alleged to look larger. An apparent exception to this was found in several cases in which a near object that looked very small through the prism looked so much larger, comparatively speaking, when it was carried

further away, and that it was thought to be actually larger than natural. But when the prism was taken off it was seen at once that the distant object had not really looked larger with the prism than it did without it; on the contrary, in most cases it looked smaller.

6. In the few cases (Nos. 13, 20, 27, 28) in which no effect was produced upon the apparent size or distance of an object across the room the amount of convergence employed was usually small, and the analogy of other cases would lead us to suppose that with stronger prisms a decided effect would be produced both upon the size and distance.

7. The effect upon the apparent size and distance of objects seen through converging prisms was less pronounced in those who from the start used but little accommodation in converging. On the other hand, it seemed particularly marked in those whose sight, at first blurred by the excessive accommodation employed, cleared up afterward through relaxation of the accommodation. Objects, as soon as they became distinct through this relaxation of the accommodation, appeared small and far off.

8. The addition of a concave glass, clearing up the sight that was blurred by the overplus of accommodation used, had no effect upon the appearance of diminution and recession produced by prisms.

9. The effect of homatropin pushed to the point of complex relaxation of the accommodation was in some cases (Nos. 5, 10, 14, 25) to make the object appear further off, but no smaller. In one case (No. 11) it prevented both the recession and the diminution that had existed before. In this case, however, the findings were rather uncertain. In cases 16 and 18 the diminution in size and the recession were marked both with homatropin and without.

10. In 14 cases out of 16 examined the effect of looking through converging prisms at an *object near by* (18 to 30 inches) was to make it appear *smaller*. This diminution in size was generally very marked, even with weak prisms—much more marked, indeed, than for distance. In one case (No. 6) a near object looked remote, but apparently no smaller, and in one (No. 11) it would seem there was no change either in size or distance.

11. *Near objects* generally looked *more remote*, although sometimes they looked nearer than they really were. With strong prisms the recession may be very pronounced.

12. In all out of six cases examined under *homatropin*, a *near object* looked either further off or smaller or both further and smaller. The effect was usually a decided one.

The *explanation* of these phenomena is still somewhat difficult, although the experiments as above described strongly indicate that the accommodation, or rather, as I originally stated, relaxation of an unnaturally tense accommodation, is the prominent factor in their production. I am inclined to think that it is the disturbance of the normal relations between accommodation and convergence, brought about by the use of converging prisms, that is chiefly responsible for the diminution in size that most people observe in an object seen through a prism of this sort. The recession that is also generally noticed seems partly due to the same cause, but is considerably influenced by the effects of contrast and perspective. The psychical element, too, must not be ignored. Many people tell us what they think they ought to see rather than what they really do see, and even those who try to give an accurate description sometimes pervert their actual impressions, since they correct by mental effort what they know to be an illusion.

THE VALUE OF ENUCLEATION.

The relative value of enucleation, as compared with the various operations by which it can be replaced, was thoroughly discussed at the International Medical Congress which met at Paris. Prof. Pflüger, of Berne, thinks enucleation has the advantage of being a simple operation, capable of rapid execution, but it has the disadvantage of leaving a small stump, which allows of but little movement in an artificial eye. Dr. Mules eviscerates the contents of the globe and inserts an aseptic glass or metallic ball, uniting the edges of the sclerotic, and rendering the wound subcutaneous by drawing the conjunctiva over it. Mr. W. A. Frost and Mr. W. Lang propose to enclose the glass ball in the capsule of Tenon, whilst Dr. Schmidt recommends attaching the recti muscles to the conjunctiva. Dr. H. R. Swanzy, of Dublin, practices Mules's operation in all cases of enucleation, excepting those of ma-

lignant tumor, or cases where sympathetic trouble is to be feared. M. de La Personne prefers the actual cautery, as recommended by M. Panas, in which a large thermo-cautery at a white heat is applied to the interior of the globe. The *débris* of the membranes are removed, and the wound is cleansed with cyanide or bichloride of mercury solution. No bleeding occurs. No sutures are needed, and pain is abolished.

Lethal meningitis has been observed in cases of enucleation of the eye affected with acute inflammation and suppuration, but it has also been seen in similar cases when no operation was performed. None of these proceedings is a complete safeguard against the occurrence of sympathetic ophthalmia, nor does neurectomy constitute a complete and permanent protection against it.

CYSTICERCUS IN THE EYE.

Gallemaerts (*La Polyclinique*, January 15, 1901) states that in certain cases it could be determined how long the cysticercus remained living in the eye; the longest period was seven years. The diagnosis is difficult in the beginning. The presence of the cysticercus is positively demonstrated only by the presence of movements. De Vincentiis has proposed to excite these movements, so as to render them more apparent, by applying a faradic current to the temple. As soon as the diagnosis is made, its extraction must be proposed, this being the only way to preserve the eye and vision. If the operation be performed early, the vision will be in great part preserved. As a prophylactic measure, meats should be more carefully inspected.

LACRYMAL OBSTRUCTION.

In the discussion of a paper read at the Ipswich Meeting of the British Medical Association, it appeared that there was not any very general consensus of opinion in regard to the treatment to be adopted in lacrymal obstruction, even in the simple forms of the disease, and, consequently, much less so in the severe forms—some using small and others large probes; some slitting the canaliculus, and inserting straight silver or gold styles. Others moulding flexible lead ones to the form of the duct, and copying the form in gold. One

speaker used a rose-headed drill or burr, worked by the ordinary dental engine; another was content with syringing at first, and slitting the canaliculus if this plan did not relieve, or even laying open the sac, and either removing it or applying the actual cautery.

Mr. George Berry said that, as a rule, there was a tendency to do too much; a conclusion that most of us who have seen many cases will be inclined to agree with. Mr. Donald Gunn spoke of the frequency of lacrymal obstruction in infants, and believes it to be associated with congenital obstruction at the lower end of the nasal duct.

REMOVAL OF FOREIGN BODIES FROM THE EYEBALL —
REPORT OF EIGHTEEN CASES.

Chas. Lukens (*Annals of Ophthalmology*, July, 1900) reports eighteen cases in detail, and draws the following conclusions:

1. The lens is the most tolerant tissue to a foreign body.
2. The phagocytic power in healthy eyes is very strong.
3. All foreign bodies should be removed as quickly as possible, especially if they are near any of the fixed tissues of the eye, as they are apt to become encysted and apparently innocuous for irregular periods of time, and thus missed and allowed to remain until they at some future time, by reason of traumatism or atrophying processes, are again set loose and excite most disastrous influences upon the organ itself, or even upon its fellow.
4. The wound of entry should be utilized wherever possible.
5. Skiagraphs are often indispensable.
6. After skiagraphic study, should the mass prove to be steel or iron, the magnet can be safely employed, followed in some cases by the use of forceps.
7. The attempt should always be made with forceps in cases of particles of other metals.
8. Copper or stone particles are the most serious.
9. Wounds posterior to the ciliary region, even if much larger, are less serious than wounds anterior to it.